

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Jotul

Maine Manufacturing Extension Partnership

Jotul Time Wise

Client Profile:

Jøtul is the largest manufacturer of cast-iron wood and gas stoves, inserts and fireplaces in the world today. Jøtul's North American operations are located in Portland, Maine. In Portland, they assemble, paint and ship gas stoves and wood inserts to numerous specialty hearth dealers and distributors across the United States and Canada. Jøtul began subsidiary operations in Portland in 1980 and has approximately 60 employees.

Situation:

Jøtul, N.A. desired to implement improvements to its production process that would have a positive impact on space utilization, quality and on-time delivery while efficiently utilizing current personnel, equipment and space at the facility. Changes to the process are emphasized that would reduce the needed production area space and warehouse storage space while utilizing standardized production processes, reducing handling of production components and increasing flexibility in meeting customers' demands. The company contacted the Maine Manufacturing Extension Partnership (Maine MEP), a NIST MEP network affiliate, for assistance.

Solution:

Jøtul, N.A. engaged in a lean implementation program assisted by the Maine MEP with education and training projects leading to continuous improvement methods throughout the production area. The steps for the proposed project consisted of the following: 1) Introduce lean training concepts to facility personnel leading to a desire to seek continuous improvement in the gas stove production process while improving quality, on-time delivery, and space requirements; 2) Standardize work processes so that employees can be utilized throughout the production process; and 3) Use the education, training, and implementation as a basis for applying continuous improvement concepts throughout other areas at Jøtul, N.A. and also to the Norwegian operations.

As a result of applying continuous improvement lean concepts, Jøtul, N.A. has reduced its manufacturing space from approximately 25,000 square feet down to about 7,500 square feet. This has freed up enough space that Jøtul is now planning on moving from two buildings to one building for both manufacturing and warehousing thus saving approximately \$258,000 per year. Jøtul has also negotiated with some of their suppliers to more efficiently send and package materials to the facility thus reducing non-value added time spent by employees sorting through materials for use in the assembling process. The Jøtul facility has also increased inventory turnover at its warehouse by between two and three times. This means they have less money tied up in the warehouse at any one time and helps minimize the possibility that they will be stuck with obsolete stoves in the future. Lastly, Jøtul's Portland facility has seen an increase in sales per employee which is increasing the margin on each stove sold and enabling Jøtul to minimize any increase in stove prices. This should increase Jøtul's market share and lead to an increase in the number of employees needed at Jøtul in the coming years. Jøtul continues to look for ways to continuously improve their production process by

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getting their Norwegian facility to commence lean implementation processes with the goal of significantly reducing the lead time for receiving stove components from Norway thus making the US operation even more responsive to customer demand. A quicker response to changing customer demand will also aid in increasing Jøtul's market share.

Results:

- * Reduced manufacturing space from 25,000 square feet. to 7,500 square feet.
- * Downsized from two buildings to one building, with a cost savings of \$258,000 per year.
- * Improved shipping and packaging of materials.
- * Increased inventory turnover.
- * Increased sales.
- * Achieved a more competitive and profitable position.
- * Working with Norwegian facility to commence lean implementation processes.

Testimonial:

"Working with Maine MEP, we have been able to implement lean concepts throughout the administrative and operational areas of our company. Lean has become a way of life, beginning with our 5S strategy and continuing with daily and weekly process improvements that not only add to the bottom line in terms of margin and general expense improvements but also increasing the value-added activities for our customer in terms of on-time delivery."

Bret Watson, President